Amendments to the Claims:

Claim 1. (Currently Amended) A biodegradable and bioactive composite material for surgical osteosynthesis applications comprising: i) at least one resorbable polymeric matrix component, ii) at least one ~~fibrillated~~ reinforcing component and iii) at least one bioceramic or bioglass reinforcing component mixed with said matrix component, wherein the particle size of the bioceramic or bioglass reinforcing component is between 2μm and 150μm.

Claim 2. (Previously Presented) A method of manufacturing a biodegradable composite according to claim 1, comprising the steps of:

a) selecting at least one first polymer for the matrix;

b) selecting at least one bioceramic material, bioglass material or mixture thereof for use as the bioceramic or bioglass reinforcing component;

c) mixing said first polymer and said bioceramic or bioglass reinforcing component together to form a mixture;

d) selecting at least one second polymer in a fiber form for the resorbable polymeric reinforcing component;

e) placing said second polymer into a desired formation;

f) combining said mixture of step (c) and said formation of step (e) to yield a second mixture; and

g) subjecting the second mixture of step (f) to heat or pressure.

3. (Previously Presented) The composite material according to claim 1 wherein the resorbable polymeric reinforcing component is in fiber form, with fiber diameter being greater than the diameter or particle size of the bioceramic or bioglass reinforcing component.

4. (Previously Presented) The composite material according to claim 3 wherein at least one fiber

has a variable thickness.

5. (Previously Presented) The composite material according to claim 1 wherein the resorbable polymeric reinforcing component is selected from the group consisting of a fabric, a plain polymeric fiber structure, a woven structure and a braided structure.

6. (Previously Presented) The composite material according to claim 1 wherein the form of the bioceramic or bioglass reinforcing component is selected from the group consisting of powder, flakes, spheres and fibers.

7. (Cancelled)

8. (Previously Presented) The composite material according to claim 1 wherein particle size of the bioceramic or bioglass reinforcing component is between 60μm and 150μm.

9. (Previously Presented) The composite material according to claim 1 wherein the amount of bioceramic or bioglass reinforcing component is 0.15 to 0.9 volume fraction.

10. (Previously Presented) The composite material according to claim 9 wherein the amount of bioceramic or bioglass reinforcing component is 0.2 to 0.6 volume fraction.

11. (Previously Presented) The composite material according to claim 1 further comprising additives selected from the group consisting of surface modifiers to improve attachment between the resorbable polymeric reinforcing component and the bioceramic or bioglass reinforcing component, a pharmaceutically active agent, and combinations thereof.

12. (Previously Presented) The composite material according to claim 11 wherein the pharmaceutically active agent is selected from the group consisting of antibiotics, wound-healing agents, chemotherapeutic agents, growth hormones, anticoagulants, and combinations thereof.

13. (Previously Presented) The composite material according to claim 1 wherein the resorbable polymeric matrix component is selected from the group consisting of polyglycolide, copolymers of glycolide, glycolide/L-lactide copolymers, glycolide/trimethylene carbonate copolymers, polylactides, stereocopolymers of polylactides, poly-L-lactide, poly-DL-lactide, L-lactide/DL-lactide copolymers, copolymers of polylactides, lactide/tetramethylglycolide copolymers, lactide/trimethylene carbonate copolymers, lactide/d-valerolactone copolymers, lactide/e-caprolactone copolymers, polylactide/polyethylene oxide copolymers, polydepsipeptides, unsymmetrically 3,6-substituted poly-1,4-dioxane-2,5-diones, poly-b-hydroxybutyrate, poly-b-hydroxybutyrate/b-hydroxyvalerate copolymers, poly-b-hydroxypropionate, poly-p-dioxanone, poly-d-valerolactone, poly-e-caprolactone, methylmethacrylate-N-vinyl pyrrolidone copolymers, polyesteramides, polyesters of oxalic acid, polydihydropyrans, polyalkyl-2-cyanocrylates, polyurethanes, polyvinylalcohol, polypeptides, poly-b-malic acid, poly-b-alkanoic acids, polycarbonates, polyorthoesters and polyphosphates.

14. (Previously Presented) The composite material according to claim 1 wherein the bioceramic or bioglass reinforcing component is selected from the group consisting of hydroxyapatite, calcium phosphates, alumina, zirconia, bioactive gel-glass, alpha wollastonite glass ceramic, and mixtures of bioglass and bioceramic materials.

15. (Previously Presented) The composite material according to claim 1 wherein the composite material exhibits ductile behavior under load.

16. (Currently Amended) A biodegradable and bioactive composite material for surgical osteosynthesis applications comprising: i) at least one resorbable polymeric matrix component, ii) at least one ~~fibrillated~~ resorbable polymeric reinforcing component in fiber form, and iii) at least one bioceramic or bioglass reinforcing component mixed with said matrix component, the diameter of the ~~oriented~~ resorbable polymeric reinforcing component being greater than the diameter or particle size of the bioceramic or bioglass reinforcing component, wherein the particle size of the bioceramic or bioglass reinforcing component is between 2μm and 150μm.

17. (Previously Presented) The method according to claim 2 wherein the mixing of step c) is accomplished by melt mixing.

18. (Previously Presented) The method according to claim 2 wherein the mixing of step c) is accomplished by solvent mixing.

19. (Previously Presented) The method according to claim 2 wherein step e) is accomplished manually.

20. (Previously Presented) The method according to claim 2 wherein step e) is accomplished with use of a machine.

21. (Previously Presented) The composite material according to claim 1 wherein the resorbable polymeric reinforcing component is in fiber form with a fiber diameter between 4μm and 800μm.

22. (Previously Presented) The composite material according to claim 21 wherein the fiber diameter is between 20μm and 500μm.